



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,051	06/20/2001	Heikki Einola	PM 276663	7538

909 7590 04/19/2005

PILLSBURY WINTHROP SHAW PITTMAN, LLP
P.O. BOX 10500
MCLEAN, VA 22102

EXAMINER

D AGOSTA, STEPHEN M

ART UNIT PAPER NUMBER

2683

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/762,051

Applicant(s)

EINOLA ET AL.

Examiner

Stephen M. D'Agosta

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,10-13,19 and 20 is/are rejected.
- 7) ☒ Claim(s) 3-9 and 14-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 12-29-04 have been fully considered but they are not persuasive.

1. The applicant argues two main points – “..operating in two networks..” AND “...calculation of cipher keys...” (see pages 2-3) – along with a “no reason to combine” argument.

2. Regarding point 1 above (and the reason to combine), the applicant argues that the prior art does not teach operating in first and second networks. The primary examiner notes that Obayashi teaches a dual mode phone that can operate in two different networks (which is well known in the art) while Barrett teaches a phone that operates in one network with multiple encryption algorithms. Hence, one skilled would combine Barrett's phone with Obayashi's phone to arrive at one that can operate in two different networks. The primary examiner notes that this is also a reason to combine.

3. Regarding point 2 above (and the reason to combine), the applicant argues that the prior art does not teach “...calculation of cipher keys in first/second networks....”. The primary examiner disagrees since he broadly interprets the claims presented before him – Barrett teaches receiving a signal from a network and determining which encryption algorithm to use (see prior rejection). Per the combination from #2 above, he would do this for any (eg. first, second, etc.) networks. Further to this point, Barret is interpreted as “calculating the (first/second) cipher key” since he receives a data “signal” from the network (eg. information necessary for calculating the second cipher key from first mobile network) and then decides which encryption algorithm/key to use, which reads on the claim for a proper rejection. Since the claims do not specifically state what the “information” is that is transmitted from said network(s), the examiner broadly interprets Barrett's disclosure as being any signal (as he discloses). This combination inherently provides encryption keys in two different networks.

Art Unit: 2683

4. The applicant additionally argues that Barrett doesn't teach first/second encryption keys calculated when operating in a given network (page 3). The primary examiner disagrees since for several reasons: 1) Should the network choose to change encryption keys, Barrett has the capability to determine which key has been selected and change to use that new key, 2) Barrett teaches the ability to change algorithms/keys and is assumed to use (at least) one when in operations, hence he would need to change from a first key to a second key, 3) The combination of Barrett and Obayahsi supports a need for the apparatus to support different encryption keys for different networks (ie. network 1 uses key 1 while network 2 uses key 2). Obayahsi's teachings of dual-mode can be interpreted as two different networks/BTS's and/or one BTS that can support both modes. Hence the rejection is proper and the primary examiner is not swayed.

5. The applicant may receive a more favorable outcome if they amend per the examiner's recommendations.

6. The last Office Action sent is attached for informational purposes only.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 10-13, 19 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Barrett et al. US 5,199,069 and further in view of Obayahsi et al. US 5,564,077.

As per **claims 1, 12, 19 and 20**, Barrett teaches a method of arranging data protection in a telecommunication system including a first mobile network, and a mobile

Art Unit: 2683

station supporting both of the mobile networks (abstract teaches encryption for wireless system), comprising:

Ciphering traffic between the mobile station and the first mobile communications network using a first cipher key AND Calculating a second cipher key to be used for ciphering traffic between the mobile station and the second network in the first communications network when the mobile station operates in the first mobile network (C2, L36-52 teaches selecting a proper encryption algorithm/key from a plurality of different ones. Also see C2, L24-35 for different types of algorithms/keys),

Transmitting information necessary for calculating the second cipher key from the first mobile network to the mobile station when the station operates in the first network (C3, L36 to C6, L7 teaches the receiver receiving data from the network and the receiver selecting the correct encryption means to use which reads on the claim); and

Calculating the second cipher key at the mobile station to be used for ciphering traffic between the mobile and the second network (C3, L10-25 teaches determining the correct key to use);

But is silent on a second mobile network.

Obayashi teaches a dual mode radio (title, abstract) which operates on a first and second mobile network (ie. analog and digital).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Barrett, such that a second mobile network is supported, to provide means for a user to operate in multiple networks while using multiple encryption means in each for added security.

As per **claims 2 and 13**, Barrett teaches claim 1 and ciphering traffic between the mobile station and the second network using the second cipher key if the mobile is handed off from the first to the second network during active connection (C5, L10-39 teaches using multiple algorithms).

As per **claim 10**, Barrett teaches claim 1 and wherein the second cipher key is calculated by shortening the first cipher key in the first network and at the mobile before a handover to the second network takes place (Barrett teaches use of a plurality of encryption algorithm/keys, C5, L10-39, whereby switching from one to another can cause the key to be either lengthened or shortened and reads on the claim).

As per **claim 11**, Barrett teaches claim 1 wherein the second cipher key is calculated in response to a decision in the first mobile network to carry out a handover to the second network (Barrett teaches use of a plurality of cipher keys C5, L10-39 and one expects multiple networks to use multiple encryption keys/algorithms).

Allowable Subject Matter

Claims 3-9 and 14-18 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. These claims recite highly specific design features and are novel in the examiner's opinion.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2683

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 571-272-7862. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stephen D'Agosta
PRIMARY EXAMINER
04-08-2005

A handwritten signature in black ink, appearing to be 'SD' or 'D'Agosta', located below the typed name and date.